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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,689	11/04/2003	Jyrki Mattila	59643.00310	4933

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EXAMINER	
LAM, DUNG LE	
ART UNIT	**PAPER NUMBER**
2617	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/699,689	MATTILA, JYRKI	
	Examiner	Art Unit	
	Dung Lam	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 0211*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/8/06 has been entered.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims **1- 24** are rejected under 35 U.S.C. 102(b) as being anticipated by ***Schilling*** (US Patent Number 6128328).

3. Regarding **claim 1**, Schilling teaches in Figure 5 a cellular communication system including at least one cell (A, B, C, Fig. 5), said cell comprising:

a coverage layer (A, B, C, Fig. 5) defining having a fixed (by definition, a cell has a fixed coverage area so that mobiles within the cell coverage can be reached by the broadcast channel carrier. The concept of having a fixed coverage that is defined by the range that the broadcast channel can reach is also admitted in the current application's background, para. 6, 728 of applicant's specification) coverage area (Col. 3, lines 40-57);

a capacity layer including a plurality of carriers (Fig. 5A further comprises of multiple carriers F1, F2, F3 , F4, F5, F6 which broadly reads on the claim requirement of a capacity layer which is defined to be nothing more but a plurality of carriers that can change its capacity), each carrier in the capacity layer having a variable coverage area (Col. 3, lines 36-39, Col. 8, lines 21-28 and Col 11 lines 25-55).

4. Regarding **claim 2**, Schilling teaches all the limitations according to claim 1. Schilling's teachings discloses a power level of a carrier in a downlink of the coverage layer defines the coverage of said at least one cell (a base station coupled with base-power means to radiates signal over a coverage area from the base station to a remote, Col. 3, lines 40-57).

5. Regarding **claim 3**, Schilling teaches all the limitations according to claim 2. Schilling further teaches said power level is variable (Col. 10, line 19-21).

6. Regarding **claim 4**, Schilling teaches all the limitations according to claim 1. Schilling further teaches that a number of carriers in the capacity layer is variable (the radii of the concentric area is adjustable which means the density or capacity of the layer is variable, Col. 8 lines 31-35 and Col. 10, lines 25-26, Col. 12 Line 55 - Col 13 Line 26).

7. Regarding **claim 5**, Schilling teaches all the limitations according to claim 1. Schilling further teaches a power level of at least one carrier of said number of carriers in the capacity layer is variable (Col. 10, line 19-21 and Col. 11, lines 51-65).

8. Regarding **claim 6**, Schilling teaches all the limitations according to claim 1. Schilling teaches that a total transmission power for a downlink is divided between the coverage layer and the capacity layer of said at least one cell in dependence on the coverage and capacity requirement of the system (Col. 11, lines 30-65).

9. Regarding **claim 7**, Schilling teaches all the limitations according to claim 6. Schilling further teaches power available for at least one of the coverage layer and the capacity layer is divided between carriers in the coverage layer and the capacity layer (Col. 11, lines 30-65).

10. Regarding **claim 8**, Schilling teaches all the limitations according to claim 1. Schilling teaches the cellular communication system comprises a multi-carrier system (6 directional antenna 109, Col. 7, lines 22-29).

11. Regarding **claim 9**, Schilling teaches all the limitations according to claim 1. Schilling further teaches the cellular communication system comprises a single carrier system (6 omni-directional antenna 109, Col. 7, lines 22-29).

12. Regarding **claims 10-18**, they are method claims corresponding to the apparatus claims 1-9. Therefore, they are rejected for the same reasons as claims 1-9.

13. Regarding **claim 19**, Schilling teaches a base station of a mobile communication system, said base station including: means for transmitting a carrier at a predetermined power level thereby defining a coverage area of a cell (Col. 3, lines 40-57 and background of the present invention) and means for transmitting a variable number of carriers thereby carrying thereby defining a coverage area of a cell (Col. 8 lines 31-35 and Col. 10, lines 25-26, Col. 12 Line 55 - Col 13 Line 26 Col. 13 ln 65- Col. 14 ln 8).

14. Regarding **claim 20**, Schilling teaches all the limitations according to claim 19. Schilling further teaches power levels of a variable number of carriers depends upon a proximity of a mobile station associated with a carrier to a base station (Col. 10, lines 25-27).

15. Regarding **claim 21**, Schilling teaches all the limitations according to claim 20. Schilling further teaches a total power of the variable number of carriers comprises a predetermined power, and wherein a portion of said predetermined power among the variable number of carriers is determined by a total number of carriers (Col. 11, lines 30-65).

16. Regarding **claim 23**, Schilling teaches a cellular communication system according to claim 5, wherein the said power level is variable in dependence on a position of a mobile station (Col. 10, lines 25-27).

17. Regarding **claim 24**, Schilling teaches a method according to claim 14, further comprising varying the power level of a carrier in the capacity layer in dependence on a position of a mobile station (Col. 10, lines 25-27).

18. Claims **22** is rejected under 35 U.S.C. 103(a) as being unpatentable by ***Schilling*** (US Patent Number 6128328) in view of **Lawrence** (US Publication Number 2004/0203837).

19. Regarding **claim 22**, Schilling teaches all the limitations according to claim 21. Schilling further teaches a second transmitting means for transmitting a variable number

of users. However, he fails to teach that the power allocated to at least one carrier is configured to reduce in response to an increase in the variable number of carriers. In an analogous art, Lawrence teaches that the power level is adjusted according to the subscriber density and demand in a particular region (para. 2). Therefore, it would have been obvious for one of ordinary skill in the art the time of the invention to modify Schilling's teaching to include an adjustable power level in accordance to the capacity of the cell to maximize the signal quality.

Response to Arguments

Applicant argues that the present invention is directed to dividing a cell into two layers and that Schilling fails to disclose or suggest at least the feature of dividing a cell into a coverage layer and a capacity layer, as recited in claim 1 and similarly recited in claims 10 and 19. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., of dividing a cell into a coverage layer and a capacity layer) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Although claim 1 recites a system comprising of "... a coverage layer ...; and a capacity layer", the claim language does not specifies two layer only and nor does it recite any feature of dividing the layers.

Applicant argues that, "Schilling merely describes a coverage area that is divided into a plurality of concentric regions with each concentric region assigned one of the N sets of frequencies. In Schilling a "cell" is divided into a number of frequency sets. For example, Schilling describes a predefined coverage area (Figure 8 cell A), is divided into N concentric regions. See, column 8 lines 21-24 of Schilling. Thus, the coverage area (alleged cell in the Office Action) does not include a coverage layer and a capacity layer as clearly recited in claims 1, 10 and 19." The examiner respectfully disagrees. As addressed above, a coverage layer is inherent in the coverage area in order to enable mobile devices to be reached/controlled by the broadcast channel carrier. This concept is also admitted to be a known concept according the background description of the invention. Thus, the concept of a coverage layer is present in the Schilling's teaching and not novel.

According to the claim language, a capacity layer is one that has a plurality of carriers and that each carrier can vary its capacity. Schilling clearly teaches a layer that contains multiple carriers (F1, F2, F3 , F4, F5, F6 in Fig. 5A.), wherein each carrier can vary its density or capacity (Col. 3, lines 36-39, Col. 8, lines 21-28 and Col 11 lines 25-55). Thus these details clearly satisfy the definition of a capacity layer according to the requirement of very broad claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL

LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER